

CLAIM LISTING

1. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

 drilling at least one substantially vertical well bore intersecting the coal seam,

 drilling at least one substantially horizontal well bore disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, and

 fracturing the coal seam along the at least one substantially horizontal well bore using a hydrajetting tool to produce a plurality of fractures, wherein the plurality of fractures is spaced to maximize interference between the fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

2. (Original) The method of claim 1, further comprising the step of casing the at least one substantially vertical well bore.

3. (Original) The method of claim 1, further comprising the step of casing the at least one substantially horizontal well bore.

4. (Original) The method of claim 1, further comprising the step of lining the at least one substantially horizontal well bore.

5. (Original) The method of claim 1, further comprising the step of removing water from the coal seam of the subterranean formation.

6. (Original) The method of claim 1, further comprising the step of inserting logging equipment into the at least one substantially vertical well bore.

7. (Original) The method of claim 1, further comprising the step of inserting logging equipment into the at least one substantially horizontal well bore.

8. (Original) The method of claim 1 wherein the at least one substantially vertical well bore terminates at or above the coal seam.

9. (Original) The method of claim 1 wherein the at least one substantially vertical well bore terminates below the coal seam.

10. (Original) The method of claim 9 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling at least one substantially horizontal well bore.

11. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,

drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores, and

fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrojetting tool to produce a plurality of fractures, wherein the plurality of fractures is spaced to maximize interference between the fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

12. (Original) The method of claim 11, wherein the plurality of substantially horizontal well bores is arranged in at least one fork pattern.

13. (Original) The method of claim 11, wherein the plurality of substantially horizontal well bores is arranged in at least two fork patterns, wherein the at least two fork patterns are opposed.

14. (Original) The method of claim 11, wherein the plurality of substantially horizontal well bores is arranged in a radial pattern.

15. (Original) The method of claim 11, further comprising the step of casing the at least one substantially vertical well bore.

16. (Original) The method of claim 11, further comprising the step of casing the plurality of substantially horizontal well bores.

17. (Original) The method of claim 11, further comprising the step of lining the plurality of substantially horizontal well bores.

18. (Original) The method of claim 11, further comprising the step of removing water from the coal seam of the subterranean formation.

19. (Original) The method of claim 11, further comprising the step of inserting logging equipment into the at least one substantially vertical well bore.

20. (Original) The method of claim 11, further comprising the step of inserting logging equipment into the plurality of substantially horizontal well bores.

21. (Original) The method of claim 11, wherein the at least one substantially vertical well bore terminates at or above the coal seam.

22. (Original) The method of claim 11, wherein the at least one substantially vertical well bore terminates below the coal seam.

23. (Original) The method of claim 22 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling the plurality of substantially horizontal well bores.

24. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,

logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore,

casing the at least one substantially vertical well bore,

drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores,

lining or casing the plurality of substantially horizontal well bores, and

fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrojetting tool to produce a plurality of fractures, wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

25. (Original) The method of claim 24, further comprising the step of removing water from the coal seam of the subterranean formation.

26. (Original) The method of claim 24 wherein the at least one substantially vertical well bore terminates at or above the coal seam.

27. (Original) The method of claim 24 wherein the at least one substantially vertical well bore terminates below the coal seam.

28. (Original) The method of claim 27 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling the plurality of substantially horizontal well bores.

29. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,

logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore,

casing the at least one substantially vertical well bore,

drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores,

lining or casing the plurality of substantially horizontal well bores, and

fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrajetting tool to produce a plurality of fractures, wherein the plurality of fractures is spaced to maximize interference between fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

30. (Original) The method of claim 29, further comprising the step of removing water from the coal seam of the subterranean formation.

31. (Original) The method of claim 29 wherein the at least one substantially vertical well bore terminates at or above the coal seam.

32. (Original) The method of claim 29 wherein the at least one substantially vertical well bore terminates below the coal seam.

33. (Original) The method of claim 32 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling the plurality of substantially horizontal well bores.

34. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,

logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore,

casing the at least one substantially vertical well bore,

drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores forms at least one fork pattern and wherein the plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores,

lining or casing the plurality of substantially horizontal well bores, and

fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrojetting tool to produce a plurality of fractures, wherein the plurality of fractures is spaced to maximize interference between fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

35. (Original) The method of claim 34, further comprising the step of removing water from the coal seam of the subterranean formation.

36. (Original) The method of claim 34 wherein the at least one substantially vertical well bore terminates at or above the coal seam.

37. (Original) The method of claim 34 wherein the at least one substantially vertical well bore terminates below the coal seam.

38. (Original) The method of claim 37 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling the plurality of substantially horizontal well bores.

39. (Original) A method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,

logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore,

casing the at least one substantially vertical well bore,

drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores forms a radial pattern and wherein the

plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores,

lining or casing the plurality of substantially horizontal well bores, and

fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrojetting tool to produce a plurality of fractures, wherein the plurality of fractures is spaced to maximize interference between fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

40. (Original) The method of claim 39, further comprising the step of removing water from the coal seam of the subterranean formation.

41. (Original) The method of claim 39 wherein the at least one substantially vertical well bore terminates at or above the coal seam.

42. (Original) The method of claim 39 wherein the at least one substantially vertical well bore terminates below the coal seam.

43. (Original) The method of claim 42 further comprising an additional step of plugging the at least one substantially vertical well bore at or above the coal seam before the step of drilling the plurality of substantially horizontal well bores.